

ULTRATUFF

WATERPROOF MEMBRANE

FIXING REQUIREMENTS FOR UTRATUFF MEMBRANE ON PLYWOOD DECKS & ROOFS

Last Updated 5th APRIL 2008

Page 1 of 2

- 1) "ULTRATUFF Coatings Ltd" requires minimum 17.5mm CD grade plywood flooring as a structural underlay for general usage recommends 19.5mm as a better option. (Refer plywood manufacturers manual).
- 2) Priming of the underside of the plywood is required before installation only if the underside of the ply is going to be left open to the elements, or if it is built over a wet area. The underside and edges of the ply should be primed with a good quality alkyd primer.
- 3) Joist spacing for 17.5mm plywood is 400mm, nogs 400mm.
Maximum joist spacing for 19.5mm plywood shall be 400mm joist, nogs 400mm.
Framing which deflects when walked over is not rigid enough. Lay sheets to minimise joints.
- 4) Remember to allow for 100mm step from floor to finished height of deck inc. Tiles & 300mm width for gutters. Open type handrails can not be fixed through top of deck. Ref. your local Territorial Authority.
- 5) Ensure supporting framing is built to adequate falls, generally 1.4 degrees for roofs & 1.3 degrees for Decks check with council re building code requirements before installing plywood (falls cannot be readily created later).
- 6) Use CD H3-treated grade plywood to provide a smooth surface to adhere the membrane to. Note that T&G plywood still requires support under tongue.
- 7) Glue (Bostic) and Screw fixing at 150mm centres to the perimeter of sheets and 200mm centres down the middle. Ensure all screws are countersunk just below the surface of the plywood 10 x 60 stainless steel screws.
- 8) Lay sheets in a brick bond pattern with the face grain (long ways) across the joist. The plywood must be continuous across at least two spans at right angles to the main supports.
- 9) Ensure sheets are close butted but not forced together with nil to 1mm gap, except wear the sheets come up against a solid wall a 3mm gap needs to be left to allow for movement. This can then be hidden with the fillet. (see 11) Sand sheet joints to remove any differences in level. Chip out delaminations and fill any gaps with construction grade epoxy filler.
- 10) Form gutters out of ply or overlay solid nogs with compressed fiber cement sheet and fit outlets (ensure lip of outlet is either level with, or below the ply) and check falls. Chamfer all sharp edges. Fit Aluminium folded L flashings to form drip edge when gutter is external type (refer roof & Deck detailed drawings). Allproof wastes are recommended as a waste & for overflows also.
- 11) Install 18mm x 18mm timber fillets to all right angles. Important that the angle fillets are fixed at 100mm centres firmly to the deck (not the wall) and glued to avoid buckling.
- 12) Contact membrane applicator as soon as possible to enable your job to be started promptly. Prime the area with a suitable primer (check with applicator) if the area to be waterproofed is going to be exposed to the elements for more than two weeks.
- 13) Posts should not pass through the substrate unless they are going to be clad over. (Water can penetrate posts which are left natural or rely on stain or paint for protection. Don't build tunnels. (They can't be waterproofed properly). Down pipes should not pass through substrate. Fit Allproof waste at penetration point & seal the downpipe into it after waterproofing is finished

For more detailed explanations or confirmation of requirements refer to your local plywood supplier's installation procedures, the building code & your local Territorial Authority. Extracts of the "Fixing Requirements for Ultratuff Membrane" have been taken from the BRANZ publication, "Good membrane roofing practice", B.I.A web site proposed changes to building code & the building code. Additional information contained in these two pages is based on our experience & testing & represents the latest information available at the date of production. No responsibility is taken for uses to which this information may be put. Contact Ultratuff coatings if further information or clarification is required.

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Page 2

Common Misconceptions:

Will the membrane have a perfectly smooth finish? No. As it is gel coating it does not self-level & will dry with a texture to it also helps reduce slip.

The joints in the plywood are still visible through the membrane. This can happen, once waterproof, the timber dries out shrinkage & movement occur. To reduce this it is important to make sure any raised joints are sanded smooth prior to membrane application. If a higher standard of finish is required the joints can be rebated & filled with construction grade epoxy filler. Not builders bog.

Will the membrane hide imperfections? No as it's a gel coating it doesn't self-level and has a dry-film thickness of between 1.2-1.5mm.

Can it be built up thicker to fix ponding problems? No. For reasons above and also the system would need drying between the multiple layers required.

If the substrate is wet, can you torch it dry? No, not if it is wet through as the torch will only dry the surface. The moisture can slow the curing time and will get trapped in, only to re-appear as bubbles later.

Can I tile it tomorrow? Only if tomorrow is 48 hours after the final coat without rain at 18-23° C and 60-70% R.H. Cooler and/or more humid conditions may prolong dry times.

Can you waterproof under the door when it's in? No, not properly unless the door is properly flashed & the flashing is suitable to waterproof onto. This is a critical area.

Can you waterproof onto the cladding? No. It is very important to apply the waterproofing before the cladding is fitted. Most cladding is designed to drain moisture and breathe at the Roof/Deck junction. There are some exceptions e.g. parapet caps, concrete walls (if they are to be painted) etc.

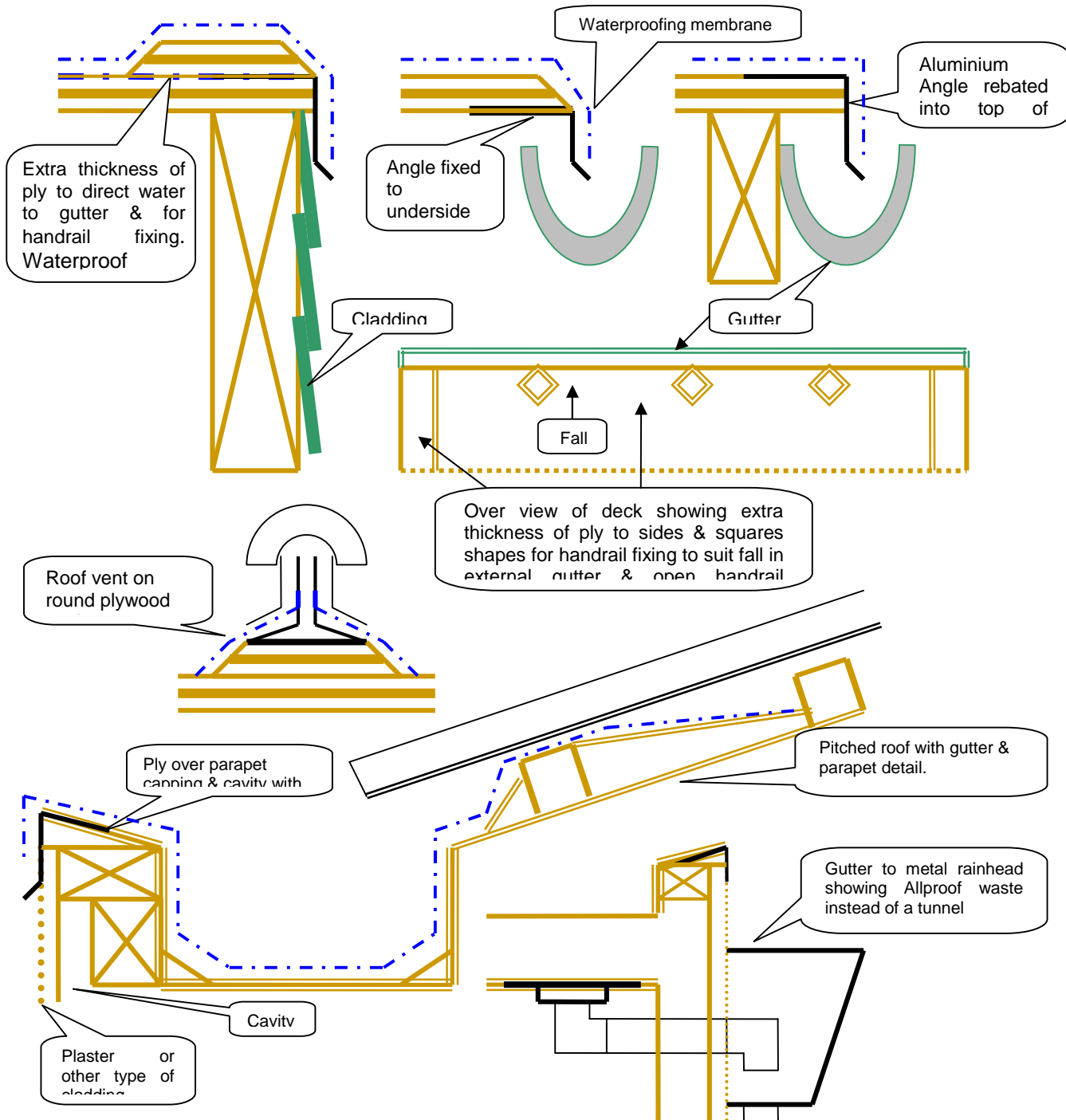
The handrail cap doesn't need waterproofing. Yes it does plaster or a timber cap & paint will not keep water out of a handrail cap. If it fails it could cause the deck to fail also.

Can you waterproof onto the faisha board? No as excessive shrinkage may occur. Fit an L flashing that can be waterproofed onto.

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Roof & Deck Detail Using Plywood

Above are ideas for detailing of roofs & decks. They are not to scale & are a guide only based on our experience. Please refer to the building code & your Territorial Authority. No responsibility is taken for users of this information.

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Roof & Deck Detail for Expansion Joints

Below are ideas for detailing of roof & deck expansion joints. They are not to scale & are a guide only based on our experience. Please also refer to the building code & your Territorial Authority. No responsibility is taken for users of this information. The Engineer or Architect should have calculated & detailed the expansion joints on the plans.

